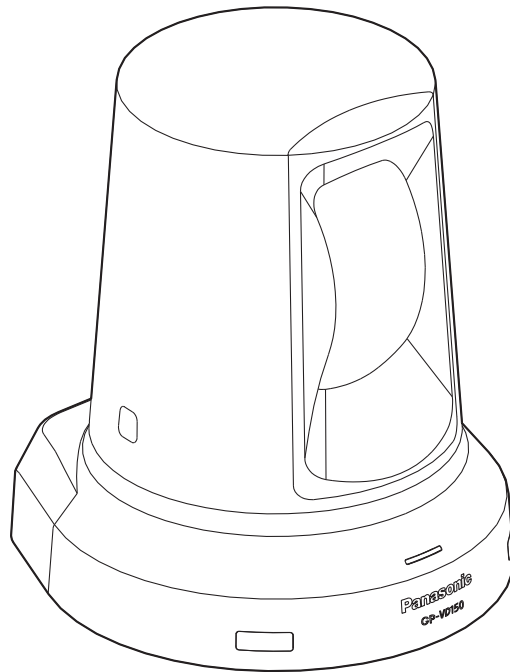# Panasonic®

Operating Instructions
<Operations and Settings>

HD Communication Camera

Model No. GP-VD150

HDMI®
HIGH-DEFINITION MULTIMEDIA INTERFACE

Contents

Before use

■ Overview

● This unit is a full HD camera integrated with a pan-tilt head and featuring a 1/3-type full HD MOS sensor and digital signal processor (DSP).

● In addition to its optical 12× zoom lens, the unit comes with a 10× digital zoom to achieve high-quality shooting that overflows with ambiance.

● This unit is designed to be used exclusively with Panasonic HD visual communications system.
Compatible HD visual communication units:
    KX-VC300NA, KX-VC300BX,
    KX-VC600NA, KX-VC600BX

■ Concerning HD Visual Communications System

● For descriptions of the panning, tilting, zooming, preset and other camera operations using an HD visual communication unit, refer to the operating instructions of the unit which is supported.

■ Concerning the wireless remote controller (optional accessory)

● This unit can be operated remotely using a wireless remote controller (model AW-RM50G) available as an optional accessory.
It cannot be operated directly using the wireless remote controller of an HD visual communication unit.
To purchase a wireless remote controller, contact your dealer.

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⑥ LOSS OF REGISTERED DATA CAUSED BY ANY FAILURE.

How the model's Operating Instructions manuals are configured

● The manual of this HD communication camera (hereafter, "the unit") is divided into two manuals: one is the <Operations and Settings> (this manual in the PDF file), and the other is the <Basics>.
Before installing the unit, be sure to read the <Basics> to ensure that the unit is installed correctly.

Unit operations

All the operations of the unit can be performed using a wireless remote controller (model AW-RM50G) available as an optional accessory.
The operation procedures detailed in this manual are operations performed from the wireless remote controller.

> **Note**
>
> ● The unit cannot be operated directly using the wireless remote controller of an HD visual communication unit.

How to turn the power on and off

■ Turning the power on

When supplying power to turn on the unit

1 **Set all the power switches of the units and devices connected in the system to ON.**

2 **Supply power to the unit.**
- This unit does not have a power switch.
  When power is supplied to it, the status display lamp will light up orange.
  What happens next is that the initial operations are performed, and when they have been completed, the POWER ON mode is established, images are output and control becomes possible.
  When the POWER ON mode is established, the status display lamp will light up green.

> **Notes**
> - It takes about 30 seconds per unit for the initial settings operation to be completed. During this period, the unit cannot be operated.
>   (Status display lamp: light up orange)
> - When operation is transferred to the STANDBY mode: The current pan-tilt position is stored in the memory (as a POWER ON preset), and the camera moves so that it points toward the back.
> - When operation is transferred to the POWER ON mode: The camera moves to the position which was stored in the memory (as a POWER ON preset) when operation was transferred to the STANDBY mode.

When turning on the supply of power to the unit from the STANDBY mode

1 **Check that the unit is in the STANDBY mode.**
- Check that the STANDBY mode has been established (the status display lamp is lit in orange).

2 **Press one of the [CAM1] to [CAM4] buttons on the wireless remote controller to select the unit.**

3 **Press the [ON/STANDBY] button on the wireless remote controller for at least 2 seconds.**
  The POWER ON mode is established, images are output, and control can be exercised.
- The unit's status display lamp now lights up green.

> **Note**
> - When operation is transferred to the POWER ON mode: The camera moves to the position which was stored in the memory (as a POWER ON preset) when operation was transferred to the STANDBY mode.

4 **If a multiple number of units are going to be used, repeat steps 2 and 3 as required.**

The unit's status display lamp blinks green when a signal matched by the remote control ID has been received, and it blinks orange when a signal that is not matched by the remote control ID has been received.

How to turn the power on and off

■ Turning the power off

1 **Turn off the supply of power to the unit.**

- The unit's power can be turned off no matter which mode (STANDBY mode or POWER ON mode) is established.

■ Concerning simultaneous mode transition linkup

As soon as the HD visual communication unit connected to the unit is set to the screen standby mode, the unit transfers to the STANDBY mode. Similarly, as soon as the device is released from the screen standby mode, the unit transfers to the POWER ON mode.

Selecting the units

Up to four units can be operated using one wireless remote controller.
Select the unit (or units) to be operated from the wireless remote controller.
Even when using only one unit, it must still be selected.

1 **Press the [CAM1], [CAM2], [CAM3] or [CAM4] button.**

The unit's status display lamp blinks green when a signal matched by the remote control ID has been received, and it blinks orange when a signal that is not matched by the remote control ID has been received.

Selecting the shooting modes (scene files)

■ Types of shooting modes

This unit has four preset shooting modes, each of which corresponds to a set of circumstances in which the subject will be shot.
Select the mode that satisfies the shooting conditions and suits your preferences.
The settings can be changed by menu operations.

● When using this unit while connected to a Panasonic HD visual communication unit, use the "FullAuto" shooting mode.
● The results of the white balance and other adjustments are stored in the memory separately by shooting mode. Be absolutely sure to select the shooting mode before making any adjustments.

> **Note**
>
> ● If "FullAuto" has been selected as the setting for Scene on the camera menu, for example, all the auto settings will be turned on, and manual operations will no longer be possible for some of the items.

> **FullAuto: Factory setting**
> The shutter speed and lens iris setting are adjusted automatically.
>
> **Manual1**
> The settings of your preferences can be established in line with the shooting scene, lighting and other conditions.
>
> **Manual2**
> The settings of your preferences can be established in line with the shooting scene, lighting and other conditions.
>
> **Manual3**
> The settings of your preferences can be established in line with the shooting scene, lighting and other conditions.

Selecting the shooting modes (scene files)

■ How to select the shooting mode
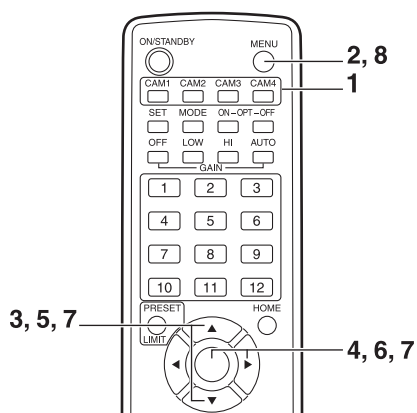
1 **Press the [CAM1], [CAM2], [CAM3] or [CAM4] button to select the unit.**

2 **Press the [MENU] button for at least 2 seconds.**

The Top Menu is displayed.

```
  * Top Menu *

⇨Camera     Scene: FullAuto
 System
 Maintenance
```
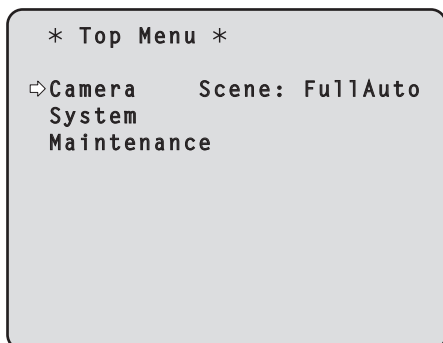
3 **Press the [▲] or [▼] button to bring the cursor to "Camera".**

4 **Press the [○] button.**

The "Camera" sub-menu is displayed on the monitor.

```
  ** Camera **

⇨Scene            FullAuto
  Contrast Level         0




 Return
```
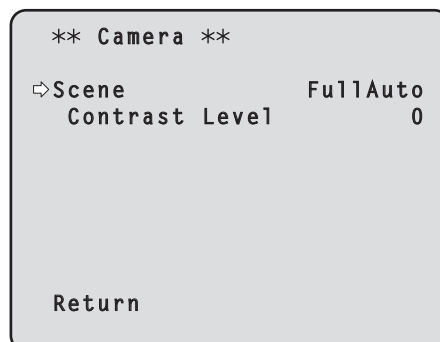
5 **Press the [▲] or [▼] button to bring the cursor to "Scene".**

6 **Press the [○] button.**

The shooting mode blinks.

7 **Press the [▲] or [▼] button to select the shooting mode (FullAuto, Manual1, Manual2 or Manual3) to be used, and press the [○] button to enter the selection.**

8 **Press the [MENU] button for at least 2 seconds.**

The menu display is exited.

Shooting

● Changing the camera's direction

Moving the camera toward the left or right (panning):
Press the [◄] or [►] button.

Moving the camera up or down (tilting):
Press the [▲] or [▼] button.

Moving the camera diagonally:
Press the [▲] or [▼] button and [◄] or [►] button at the same time.

Returning the camera to the reference position:
Press the [HOME] button for at least 2 seconds.

● Using the zoom function

Zooming in (the subject becomes magnified in size):
Press the [T] button of [ZOOM].

Zooming out (the subject becomes reduced in size):
Press the [W] button of [ZOOM].

● Switching the direction or zoom speed

Changing the direction or zoom at high speed:
Press the [FAST] button.

Changing the direction or zoom at low speed:
Press the [SLOW] button.

The lens focus control speed is also changed at the same time.

9

What to do when encountering problems in the basic shooting operations

If the trouble is not resolved by taking the action suggested below, refer to "Troubleshooting" (in the <Basics>).

The unit does not move.
● Press the [CAM1], [CAM2], [CAM3] or [CAM4] button to select the unit which is to be operated.
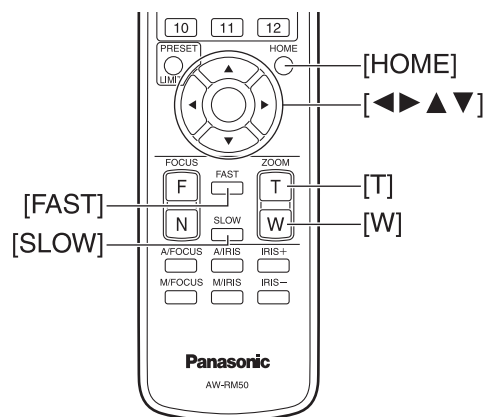 If only one unit is being used, it is normally selected using the [CAM1] button.
● If the unit's status display lamp is off or lights up orange, it means that the unit's power is not on.
  Refer to "How to turn the power on and off" (page 5), and turn on the power.
● If the unit's status display lamp does not blink even when the wireless remote controller is operated near the unit's wireless remote controller signal light-sensing area, it means that the wireless remote controller's batteries have run down.
  Replace the batteries.

The menu screen is displayed.
Press the [MENU] button for at least 2 seconds to exit the menu.

The lens focus is not adjusted automatically.
Press the [A/FOCUS] button to switch to auto focusing. (Auto focusing does not work during panning or tilting operations.)

The camera picture is too light or too dark.
1. Press the [A/IRIS] button to switch automatically to the lens iris adjustment.
2. Press the [AUTO] button of [GAIN] to switch automatically to the gain adjustment.

Something is wrong with the coloring of the camera pictures.
Refer to "Auto tracking white adjustment (ATW)" (page 16), and switch to "ATW".

More advanced operations

Manual shooting (see pages 12 to 13)

- Manual adjustment of focus
- Manual adjustment of iris
- Manual adjustment of shutter speed
- Manual adjustment of gain

Preset memories (see page 14)

- Up to 12 settings for the camera direction (panning and tilting), zoom, focus, iris, gain up and white balance can be registered in the preset memories, and called.
- The number of settings which can be registered and called is 12, which is the number of settings for the wireless remote controller (model AW-RM50G), which is sold separately.

White balance adjustment (see pages 15 to 16)

- This adjustment is performed to express the white accurately. Its setting also has an effect on the color tones of the entire screen.
- It must be performed when using the unit for the first time or when the unit has not been used for a prolonged period.
- It must be performed when the lighting conditions or brightness has changed.
- Once the white balance has been attained, no further adjustment is required provided that the unit is going to be used under the same conditions.

Manual shooting

■Manually adjusting the focus

The lens focus can be adjusted manually.

1 **Press the [M/FOCUS] button to switch the focus to manual adjustment.**

2 **Press the [F] or [N] button of [FOCUS], and adjust the focus.**

When the [F] button is pressed, the focus moves further away (far); conversely, when the [N] button is pressed, it moves nearer (near).
The speed of focusing and other adjustments can be switched to fast or slow by pressing the [FAST] or [SLOW] button, respectively.

3 **If necessary, press the [A/FOCUS] button to return the focus to the automatic adjustment.**

> **Note**
>
> ● When the focus is set to manual, the subject may go out of focus during panning, tilting and zooming. Therefore, the unit comes with a function which compensates for this. (Focus compensation during zooming function: Focus ADJ With PTZ.)
> This function was set to ON at the factory.
> If the function has been set to OFF, either adjust the focus, as required, after zooming or set the focus to auto. (See page 27.)

■Manually adjusting the iris

The lens iris can be adjusted manually.

1 **Press the [M/IRIS] button to switch the iris to manual adjustment.**

2 **Adjust the iris using the [IRIS +] or [IRIS –] button.**

Press the [IRIS +] button to adjust the lens iris in the opening direction; conversely, press the [IRIS –] button to adjust the lens iris in the closing direction.

3 **If necessary, press the [A/IRIS] button to return the iris to the automatic adjustment.**

Manual shooting

■ Manually adjusting the shutter speed

The shutter speed adjustment can be set using one of the two camera menu procedures. One is a method that specifies the time (where a time such as 1/250 sec. is designated), and the other is a method that specifies the frequency (where synchro scan, 60.24 Hz, etc. is designated).

When shooting a TV screen or PC monitor screen, the horizontal noise generated when the screen is shot can be minimized by adjusting the frequency to the screen frequency using synchro scan.

For further details, refer to the [Shutter Mode] and [Step/Synchro] items on page 21.

■ Manually adjusting the gain

The gain is adjusted using the wireless remote controller. For further details, refer to the [Gain] item on page 21.

> **Note**
>
> ● When adjusting the gain, the light quantity may change suddenly (causing the image output to be subjected to a shock).

1 Press the [OFF], [LOW] or [HI] button.

These buttons enable the gain increase to be selected in three steps.
[LOW] is used to select 9 dB; [HI] is used to select 18 dB.

2 If necessary, press the [AUTO] button in order to return the gain to the automatic adjustment (AGC).

The maximum gain of the automatic adjustment can be set by the menu.
For further details, refer to the [AGC Max Gain] item on page 21.

Preset memories

This unit enables up to 12 settings for the camera direction (panning and tilting), zoom, focus, iris, gain and white balance to be registered in its preset memories, and called.

● The operating mode (manual or auto setting) is not registered for the focus and iris settings.
  The current focus and iris values are registered.
● The focus and iris values can be recalled only when the manual settings are applicable.
● AWB A, AWB B or ATW is registered as the white balance setting. The values selected when AWB was established are recalled as the adjustment values of AWB A or AWB B.

Notes

● When there is a large difference in the environmental temperature between the time of registration and the time the setting is called, displacement of the preset position may occur.
● If displacement occurs, perform registration again.
● While preset settings are being called, it is not possible to perform manual operations such as panning, tilting, zooming or iris adjustments.
● If, when one set of preset settings has been called, another set of preset settings is then called, the first set of preset settings which have been called will take precedence.

Twelve settings (preset No.1 to No.12) can be registered and called using the wireless remote controller.
The [1] to [12] buttons correspond to the unit's preset memories No.1 to No.12.

● Registering the settings in the preset memories

1 Display the picture to be shot on the monitor.
Operate the pan, tilt or zoom buttons to determine the camera angle.
Adjust the focus, iris, gain and white balance if they need to be adjusted.

2 While holding down the [PRESET] button, press the button corresponding to the preset memory number.
● If a preset memory number with an already registered setting has been selected, the existing setting will be erased and replaced with the new one.

● Calling the settings of the preset memories

1 Press the button in which the preset memory setting has been registered.

White balance adjustment

■ White balance adjustment

In order for the white to be reproduced accurately, the ratio between the three primary colors (RGB) is adjusted. If the white balance has shifted out of adjustment, not only will the white be reproduced poorly but the color tones of the entire screen will also be degraded.

- **This adjustment must be performed when using the unit for the first time or when the unit has not been used for a prolonged period.**
- **It must be performed when the lighting conditions or brightness has changed.**

When the [SET] button on the wireless remote controller has been pressed, either the AWB (automatic white balance) adjustment which is performed automatically or the ATW (automatic tracking white) adjustment which is constantly and continuously adjusted can be selected.

The results of the AWB adjustment can be stored in two memories, A and B, when "AWB A" or "AWB B" has been selected for the white balance.

- Once the white balance has been adjusted when the unit is used with the same settings and under the same conditions, its setting is completed simply by selecting a menu setting.
  There is no need to set it again.
- Once a new setting is entered, the previous setting will be erased.

Use the two memories to store settings corresponding to different shooting conditions.

● Automatic adjustment (AWB: AWB A or AWB B)

1 **Shoot a white subject (such as a white wall or handkerchief) so that it fills the screen.**
- Do not shoot shiny or very bright objects.

- Steps **2** through **8** represent the procedure for selecting the "AWB A" or "AWB B" memory. They need not be taken if a selection has already been made.

2 **Select Manual1, Manual2 or Manual3 as the shooting mode by following the procedure in "Selecting the shooting modes (scene files)" (page 8).**

```
       ** Camera **

      ⇨Scene           Manual1
        Contrast
        Picture
        Color Matrix



        Return
```
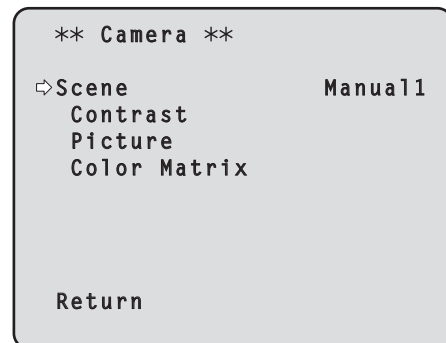
3 **Press the [▲] or [▼] button to bring the cursor to "Picture".**

4 **Press the [○] button.**
The "Picture 1/2" sub-menu is displayed.

```
       *** Picture 1/2 ***

      ⇨Chroma Level          -1
        AWB Mode           AWB A
         R Gain                0
         B Gain                0
        Detail               Low
        Flesh Tone Mode      Off
        DNR                 High

        Return
```

15
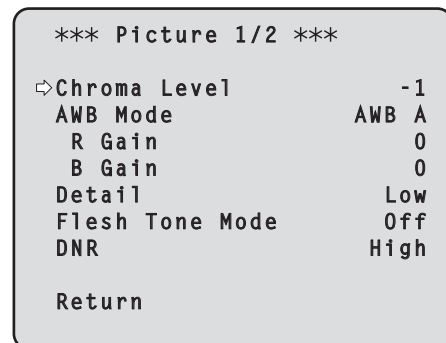
White balance adjustment

5 Press the [▲] or [▼] button to bring the cursor to "AWB Mode".

6 Press the [○] button.

"AWB Mode" starts blinking.

7 Press the [▲] or [▼] button to change the AWB mode to be used to "AWB A" or "AWB B", and press the [○] button to enter the selection.

8 Press the [MENU] button for at least 2 seconds.

The menu display is exited.

9 Press the [SET] button for at least 2 seconds.

The auto white balance adjustment (AWB) is performed, and the white balance setting is entered.

● When the white balance adjustment is completed successfully, "AWB OK" appears in the center of the screen.

```
AWB OK
```

● When the adjustment has failed, an error message such as "OUT RANGE NG", "HIGH LIGHT NG", "LOW LIGHT NG" or "ATW NG" is displayed.

Notes

● ON must be selected as the OSD Status setting in order for messages to be displayed.
[Top Menu]→[System]→[OSD Status] on [Other 2/2]
● White balance may not be correctly set if the lighting of the object is too weak.
● Since the unit has a built-in memory, the set white balance will remain in the memory even if power is turned off. Therefore, it is not necessary to reset the white balance if the color temperature of those objects remains unchanged. However, it must be reset if the color temperature changes, such as when you move from indoors to outside, or vice versa.

●Auto tracking white adjustment (ATW)

When the white balance adjustment is set to "ATW", the white balance continues to be adjusted automatically all the time, and it is automatically corrected even when the light source or color temperature has changed to produce completely natural pictures.

This function works when "ATW" is selected instead of "AWB A" or "AWB B" by following the steps for "Automatic adjustment" in "White balance adjustment" (page 15).

Notes

● ATW might not function properly when high brightness light (ex. fluorescent lamp) beams into a screen.
● White balance may not be accurately set if there is no white object in the scene being shot.
● The white balance may shift out of adjustment when a different kind of light source such as sunlight or fluorescent lighting applies.

16

Basic setting menu operations

Menus are displayed on the monitor when the unit's settings are to be selected.
The monitor is connected to the video signal output connector.
The basic menu operations involve displaying sub-menus from the Top Menu items, and selecting settings on the sub-menus.
Some sub-menus have menu items for performing more detailed settings.

The menu operations are conducted using the wireless remote controller.

The following are the basic operations for changing the menu item settings using the wireless remote controller.

Table of operations

Menu operation	Wireless remote controller
Selecting the unit to be operated	Press the [CAM1], [CAM2], [CAM3] or [CAM4] button.
Displaying the Top Menu	Press the [MENU] button for at least 2 seconds.
Selecting the items	Press the [▲] or [▼] ([◄] or [►]) button.
Displaying the sub-menus	Press the [○] button.
Returning to the previous menu	With the cursor at the [Return] position, press the [○] button.
Changing the settings	With the cursor at the item to be changed, press the [○] button to start the item's value blinking. Use the [▲], [▼], [◄] and [►] buttons to change the value, and press the [○] button to enter the change.
Canceling the setting change	While the setting is blinking, press the [MENU] button quickly (for less than 2 seconds).
Exiting the menu operations	Press the [MENU] button for at least 2 seconds.

Note

● Perform the menu operations and exit from the menus using the wireless remote controller which displayed the Top Menu.

Basic setting menu operations

1 **Press the [CAM1], [CAM2], [CAM3] or [CAM4] button to select the unit which is to be operated.**

2 **Press the [MENU] button for at least 2 seconds.**

The Top Menu is displayed.

3 **Press the [▲] or [▼] button to bring the cursor to the item to be selected.**

Each time the [▲] or [▼] button is pressed, the cursor moves.
The cursor can be moved in the same way using the [◀] and [▶] buttons.

4 **Press the [○] button.**

The sub-menu of the selected item is displayed.
(Some sub-menu items have a sub-menu of their own.)

5 **Press the [▲] or [▼] button to bring the cursor to the item to be set.**

Each time the [▲] or [▼] button is pressed, the cursor moves.
The cursor can be moved in the same way using the [◀] and [▶] buttons.
With the cursor at the "Return" position, press the [○] button to return to the previous menu.

6 **Press the [○] button.**

The value of the item to be set starts blinking.

7 **Press the [▲] or [▼] button to change the setting.**

The setting can be changed in the same way using the [◀] and [▶] buttons.

8 **Press the [○] button.**

The value of the item to be set is entered, and it stops blinking.

9 **After the setting has been completed, press the [MENU] button for at least 2 seconds.**

The menu display is exited.

Setting the menu items

■ Setting the menu items

When the unit's settings are to be selected, the menus are displayed on the monitor.
The monitor is connected to the video signal output connector.
The basic menu operations involve displaying sub-menus from the Top Menu items, and selecting settings on the sub-menus.
Some sub-menus have menu items for performing more detailed settings.
For details on the basic operations to display the menus and change the items using the wireless remote controller, refer to pages 17 to 18.

The "✷" and "#" marks in the menu titles indicate the hierarchical level of the menu currently displayed.
For instance, "✷ `Top Menu` ✷" indicates the first hierarchical level whereas "✷✷ `Camera` ✷✷" and "## `System` ##" indicate that the second hierarchical level is now displayed.
Menu items accompanied by a "✷" mark indicate data which is stored on a scene by scene basis; menu items accompanied by a "#" mark indicate data which is stored together for one camera regardless of the scenes.

■ Top Menu

```
 ✷ Top Menu ✷

⇨Camera     Scene: FullAuto
 System
 Maintenance
```
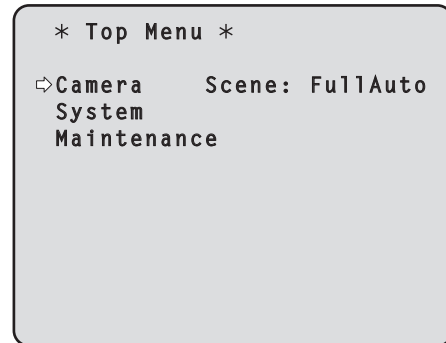
Camera
    Select this to open the camera menu relating to the camera images.

System
    Select this to open the system menu relating to the camera's output image settings, etc.

Maintenance
    Select this to display the Maintenance menu used to check the camera's firmware version or initialize its settings.
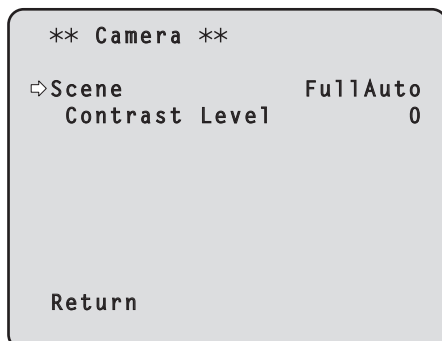
Note

● The Top Menu does not have a "Return" setting.
    To close the menu screen, use the wireless remote controller to perform the operation to close the menu screen.
    For details, refer to pages 17 to 18.

Setting the menu items

■ Camera screen (when FullAuto is selected)

This menu is used for the camera image settings.

```
** Camera **

⇨Scene           FullAuto
  Contrast Level        0




  Return
```

Scene
[FullAuto, Manual1, Manual2, Manual3]
    Selected here is the shooting mode that matches the shooting situation.
    Select the mode which best suits the prevailing shooting conditions and the user's preferences.

    FullAuto: In this mode, the optimum settings and adjustments for the shooting conditions at hand are automatically established. When "FullAuto" has been selected, the detailed setting and adjustment menus are not displayed.

    Manual1 to 3:   In these modes, the detailed settings and adjustments are established manually to match the prevailing shooting conditions and the user's preferences. When the Manual1, Manual2 or Manual3 mode has been selected, the detailed setting and adjustment menu for the mode concerned is displayed.

Contrast Level [–5 to +5]
    Use the contrast level to adjust the image brightness.

Return
    Use this to return to the previous menu.

■ Camera screen (when Manual1 to 3 is selected)

```
** Camera **

⇨Scene            Manual1
  Contrast
  Picture
  Color Matrix



  Return
```
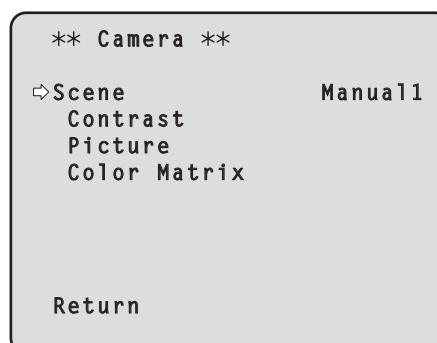
Scene
[FullAuto, Manual1, Manual2, Manual3]
    Refer to section on Scene in the column on the left.

Contrast
    Select this to display the Contrast screen to adjust the brightness.

Picture
    Select this to display the Picture screen to adjust the image quality.
    Two screens (Picture 1/2 and Picture 2/2) are provided for the image quality adjustment menu.

Color Matrix
    Select this to load the color matrix data which has been preset and compensate the saturation and hue.

Return
    Use this to return to the previous menu.

Setting the menu items

■Contrast screen

```
*** Contrast ***

⇨Contrast Mode       Auto
  Contrast Level        0
  Shutter Mode       ----
   Step/Synchro      ----
   Frame Mix         ----
   AutoF.Mix Max Gain  0dB
 Gain                Auto
 AGC Max Gain        18dB
 Return
```
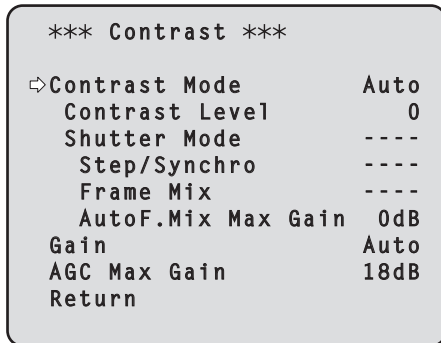
Contrast Mode [Auto, Manual]

This item is used to select whether the image brightness (contrast) is to be controlled automatically or manually.

Auto: The iris, shutter speed and frame addition are controlled and the camera brightness is adjusted automatically.

Manual: Operations are performed using the manually set values.

Switching between the contrast modes is also possible by pressing the [A/IRIS] and [M/IRIS] buttons on the wireless remote controller.

Contrast Level [–5 to +5]

Set here is the contrast level when the image brightness is adjusted.
This item can be set when "Auto" has been selected as the "Contrast Mode" setting.

Shutter Mode [Off, Step, Synchro]

Select for camera shutter speed.
This item can be set when "Manual" has been selected as the "Contrast Mode" setting.

Off: The shutter is set to OFF (so that it cannot be tripped).

Step: The step shutter is set (the steps can be changed).

Synchro: The synchro shutter is set (the setting can be changed continuously).

Step/Synchro

This is used to adjust the shutter speed in the mode which was selected as the "Shutter Mode" setting.
When a higher shutter speed is selected, fast-moving subjects do not become blurred easily but the images will be darker.

The shutter speeds that can be set are listed below.

When "Step" is selected as the "Shutter Mode"	When "Synchro" is selected as the "Shutter Mode"
1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000	60.24 Hz to max. 646.21 Hz (255 steps)

Frame Mix [Auto, Off, 6dB, 12dB, 18dB]

Select for frame addition (gain-up using sensor storage) amount.
This item can be set when "Off" is selected as the "Shutter Mode" item setting.
When frame addition is performed, it will appear as if the images are missing some frames.

AutoF. Mix Max Gain [0dB, 6dB, 12dB, 18dB]

When "Auto" for the "Contrast Mode" or "Auto" for the "Frame Mix" is selected, the maximum frame addition amount can be set.
If frame addition is performed at the Auto setting, it will appear as if the images are missing some frames.

Gain [Auto, 0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB]

The image gain is adjusted here.
In locations which are too dark, adjust the gain upward; conversely, in locations which are too bright, adjust it downward.
When "Auto" is set, the light quantity is adjusted automatically.
The noise increases when the gain is increased.
Switching the gain is also possible by pressing the [OFF], [LOW], [HI] and [AUTO] buttons for [GAIN] on the wireless remote controller.
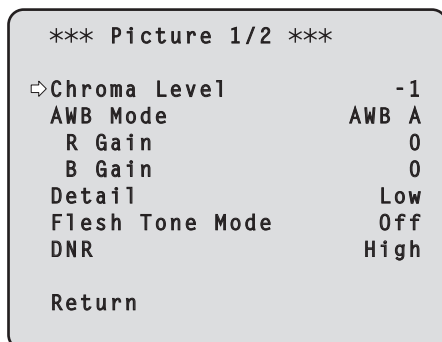
AGC Max Gain [6dB, 12dB, 18dB]

When "Auto" is selected as the "Gain" setting, the maximum gain-up amount can be set.

Return

Use this to return to the previous menu.

Setting the menu items

■ Picture 1/2 screen

```
*** Picture 1/2 ***

⇨Chroma Level          -1
 AWB Mode          AWB A
  R Gain               0
  B Gain               0
 Detail             Low
 Flesh Tone Mode    Off
 DNR               High

 Return
```

Chroma Level [–3 to +3]
Set here is the color intensity (chroma level) of the images.

AWB Mode [ATW, AWB A, AWB B]
The white balance mode is selected here.
Select the mode when the coloring is not natural because of the nature of the light source or other factors.
If the white color serving as the reference can be recognized, subjects can be shot with natural coloring.
ATW: In this mode, the white balance is compensated for automatically, even if changes occur in the light source or color temperature, by a process of continuous and automatic adjustment.
AWB A, AWB B:
When AWB A or AWB B is selected and the white balance is executed, the adjustment results obtained are stored in the memory selected.
When AWB A or AWB B is then selected, the white balance stored in the selected memory can be recalled.

R Gain, B Gain [–30 to +30]
When "AWB A" or "AWB B" has been selected as the AWB Mode setting, the white balance can be finely adjusted upon completion of the automatic white balance (AWB) adjustment.

Detail [Off, Low, High]
The image detail (image sharpness) is adjusted here.
When "Low" or "High" is selected, the detail is enhanced.

Flesh Tone Mode [Off, Low, High]
Set here is the flesh tone mode for displaying the subjects' skin so that it appears more smoothly and eye-pleasingly.
When "Low" or "High" is selected, the effect is enhanced even more.

DNR [Off, Low, High]
Set here is the level of the digital noise reduction effect so that light, noise-free and clear images will be output even at night and in other low-brightness environments.
When "Low" or "High" is selected, even more noise can be eliminated.
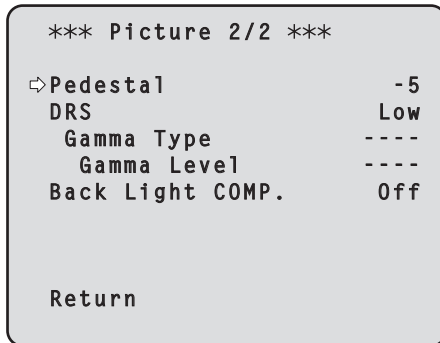However, there is an increased possibility that afterimages may occur.

Return
Use this to return to the previous menu.

Notes
● When the automatic white balance (AWB) adjustment is performed, the R Gain and B Gain values return to "0".
● When "AWB A" or "AWB B" has been selected as the AWB Mode setting, the R Gain and B Gain adjustment values can be stored in the two memories (A and B).
● When new values are set, the previous data is deleted. Use one memory for one set of shooting conditions and the other memory for another set of shooting conditions.
● In registering data in the preset memories, the R Gain and B Gain settings (-30 to +30) are not stored, but the white balance (color) statuses that are established after adjustments have been made using R Gain and B Gain can be stored.
● If Mode A has been selected as the Preset Scope setting, the R Gain and B Gain settings will return to "0" when the data in the preset memories is recalled.
● When ATW has been selected as the AWB Mode setting, R Gain and B Gain cannot be adjusted.

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Setting the menu items

■ Picture 2/2 screen

```
*** Picture 2/2 ***

⇨Pedestal              -5
 DRS                  Low
  Gamma Type          ----
   Gamma Level        ----
 Back Light COMP.      Off


 Return
```

Pedestal [–10 to +10]
This item is used to adjust the black level (adjust the pedestal) so that the dark parts of the images are easier to see.
These parts become darker when a negative setting is selected and, conversely, lighter when a positive setting is selected.

DRS [Off, Low, High]
Set here is the DRS function which provides just the right amount of compensation when images with significant light/dark differences are displayed.
When "Low" or "High" is selected, the effect is enhanced even more.
This may make noise more perceptible with some scenes.

Gamma Type [Off, Normal, Cinema]
Selected here is the type of gamma curve.
The selected setting takes effect when "Off" is selected as the "DRS" item setting. Normally, the "Normal" setting is used. When "Cinema" is selected, images giving off an atmosphere like movies can be shot.

Gamma Level [Low, Mid, High]
This item is used to adjust the gamma compensation level.
The item's setting takes effect when "Off" has been selected as the "DRS" setting and "Normal" as the "Gamma Type" setting.
When "Low" is set, the images appear sedate and composed. The resulting gamma curve has a gentle gradient in the low-brightness areas, and the contrast is sharper.
Conversely, when "High" is set, the tonal range in the dark area is expanded so that the images take on a lighter tone. The resulting gamma curve has a sharp gradient in the low-brightness areas, and the contrast is softer.

Back Light COMP. [Off, On]
"On" or "Off" is set here for the backlight compensation function.
Under backlight conditions, the function prevents darkening as a result of light striking the backs of subjects, and makes it possible to shoot images in shade or shadow more brightly.
The function takes effect when "Auto" has been selected as the Contrast Mode, Gain or Frame Mix item setting.
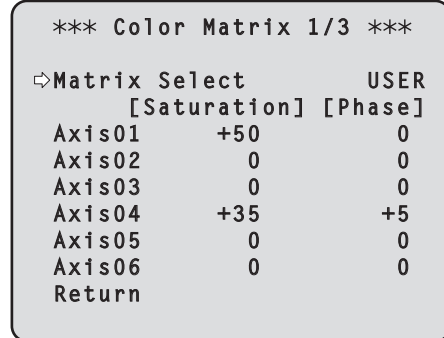
Return
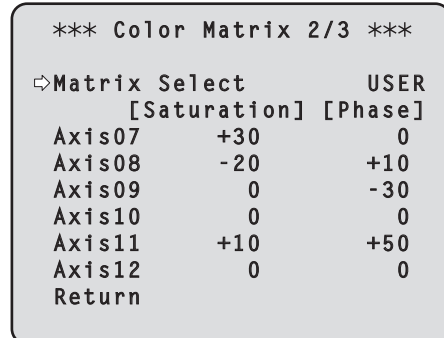Use this to return to the previous menu.

■ 16-axis color matrix

● Monitor output menu (OSD)

<Color matrix 1/3 screen>

```
*** Color Matrix 1/3 ***

⇨Matrix Select        USER
      [Saturation] [Phase]
 Axis01      +50         0
 Axis02        0         0
 Axis03        0         0
 Axis04      +35        +5
 Axis05        0         0
 Axis06        0         0
 Return
```

<Color matrix 2/3 screen>

```
*** Color Matrix 2/3 ***

⇨Matrix Select        USER
      [Saturation] [Phase]
 Axis07      +30         0
 Axis08      -20       +10
 Axis09        0       -30
 Axis10        0         0
 Axis11      +10       +50
 Axis12        0         0
 Return
```

<Color matrix 3/3 screen>

```
*** Color Matrix 3/3 ***

⇨Matrix Select        USER
      [Saturation] [Phase]
 Axis13        0         0
 Axis14      +35       +10
 Axis15        0         0
 Axis16        0         0


 Return
```
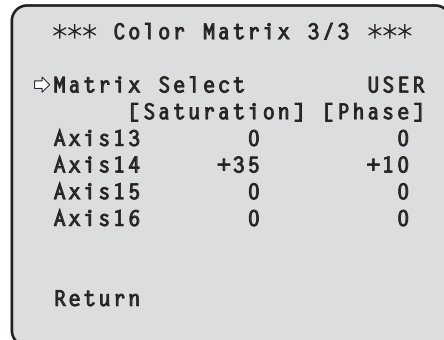
Setting the menu items

● Color Matrix 1/3 to 3/3 screens:

Matrix Select [Normal, EBU, NTSC, USER]
This loads the color matrix data which has been preset, and compensates the saturation and hue.
When "USER" is selected, the saturation and hue can be finely adjusted using the 16-axis color matrix (Axis01 to Axis16).

● Color Matrix 1/3 to 3/3 screens:

Axis01 to Axis16: Saturation
[–127 to +127]

● User Color Matrix Setup screen:

Axis01 to Axis16: Saturation
[–127 to +127]
This enables the saturation of Axis01 to Axis16 to be finely adjusted.

● Color Matrix 1/3 to 3/3 screens:

Axis01 to Axis16: Phase
[–127 to +127]

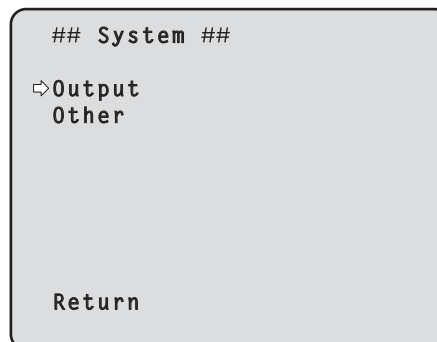## ● User Color Matrix Setup screen:

Axis01 to Axis16: Phase
[–127 to +127]
This enables the hue of Axis01 to Axis16 to be finely adjusted.

■ System screen

This menu has items that relate to the camera's output image settings.

```
   ## System ##

 ⇨Output
  Other




   Return
```

Output
This displays the Output screen on which to select the camera's output image settings.

Other
This displays the Other screen on which to select the settings for the installation status of the camera's pan-tilt head unit and operating speed as well as the settings relating to the other functions.
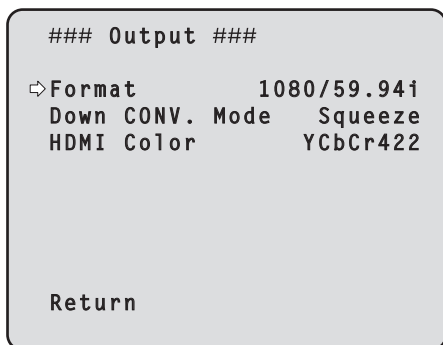
Return
Use this to return to the previous menu.

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Setting the menu items

■ Output screen

```
### Output ###

⇨Format          1080/59.94i
 Down CONV. Mode    Squeeze
 HDMI Color       YCbCr422




 Return
```

Format [1080/59.94i, 480/59.94p]
The video format is changed on this screen.
For details on how to change the format, refer to "Changing the format" (page 26).

Down CONV. Mode
[Squeeze, SideCut]
The down-conversion mode is selected here.

Squeeze	When the 4:3 aspect ratio has been set for the monitor screen, the images are squeezed horizontally and extended vertically changing the view of the angle.
SideCut	With the vertical height serving as the reference, the parts which extend beyond this at the two sides are cropped changing the view of the angle.

HDMI Color
[RGB-NOR, RGB-ENH, YCbCr422, YCbCr444]
Set here is the HDMI color output.
- When an HDMI monitor is used, use "YCbCr422" under normal circumstances.
- In cases where, for instance, HDMI (RGB) signals are converted and output to a DVI monitor, the settings required will differ depending on the color gradation supported by the monitor.

RGB-NOR	The RGB output signals are output in the 16 to 235 range.
RGB-ENH	The RGB output signals are output in the 0 to 255 range.

- If the black parts of the images appear overexposed when "RGB-NOR" has been selected, use the "RGB-ENH" setting instead.
- Conversely, if the images are displayed with a loss of dark detail when "RGB-ENH" has been selected, use the "RGB-NOR" setting instead.

Note
- If an HDMI Color setting which is not supported by the monitor has been specified, the HDMI Color setting may be changed automatically. (The menu display will remain unchanged.)

Return
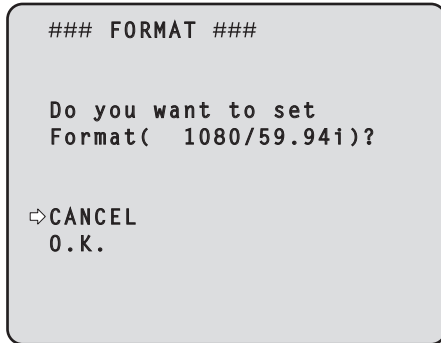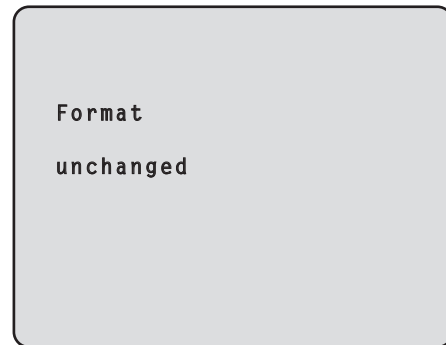Use this to return to the previous menu.

Setting the menu items

●Changing the format

When the format is changed on the Output screen from its current setting, the Format change check screen appears.
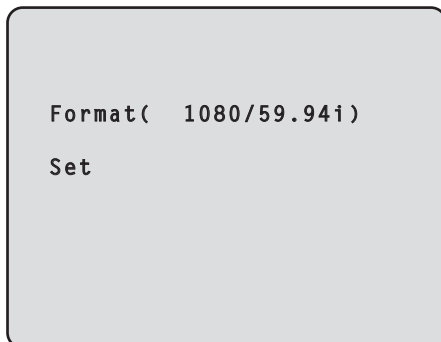
Format change check screen

```
### FORMAT ###


Do you want to set
Format(  1080/59.94i)?


⇨CANCEL
 O.K.
```

- The format (1080/59.94i, 480/59.94p) to be set is displayed within the parentheses on the screen.
- When the cursor is moved to "O.K." on the format change check screen and the setting is entered, the Format Set screen appears for a few seconds, and the format is changed.
  After the format has been changed, the display returns to the Output screen.
  With some types of monitors, the Format Set screen may not be displayed.

Format Set screen

```
Format(  1080/59.94i)

Set
```

- The format (1080/59.94i, 480/59.94p) to be set is displayed within the parentheses on the screen.
- When the cursor is moved to "CANCEL" on the format change check screen and the setting is entered, the Format unchanged screen appears for 5 seconds, the format is left unchanged, and the display returns to the Output screen.

Format unchanged screen

```
Format

unchanged
```

Note

- Do not make any changes when connecting to an HD visual communications system.

26

Setting the menu items

■ Other 1/2 screen

```
### Other 1/2 ###

⇨Install Position   Desktop
 Preset Speed          10
 Preset Scope       Mode A
 Digital Zoom       Disable
 Speed With Zoom POS.   On
 Focus Mode           Auto
  Focus ADJ With PTZ. ----

 Return
```

Install Position [Desktop]

Stand-alone is the only installation option available for the unit.
Desktop: Stand-alone installation

Preset Speed [1 to 30]

There are 30 preset pan-tilt operation speeds when regenerating the camera direction and other information which are registered in the preset memory.

> **Note**
>
> ● If a high value is selected for the Preset Speed setting, the image on the screen may shake when operation stops.

Preset Scope [Mode A, Mode B, Mode C]

Selected here are the setting items to be recalled when the contents of the preset memory are regenerated.
Mode A: Pan, Tilt, Zoom (including digital zoom), Focus, Iris, Gain, White-BAL
Mode B: Pan, Tilt, Zoom (including digital zoom), Focus, Iris
Mode C: Pan, Tilt, Zoom (including digital zoom), Focus

Digital Zoom [Disable, Enable]

"Enable" or "Disable" is set here for the digital zoom function.
If zooming is performed toward the Tele end beyond the maximum position when "Enable" has been selected, the digital zoom can be operated continuously. Zooming will stop temporarily at the position where the optical zoom and digital zoom are switched so after it has stopped at this position, proceed with zooming again.
When the setting is changed to "Disable" while already in the digital zoom region, the zoom will automatically move to the maximum position of the optical zoom.

Speed With Zoom POS. [Off, On]

"On" or "Off" is set here for the function used to adjust the camera direction's adjustment speed in conjunction with the zoom magnification.
When "On" is set, the panning and tilting operations will become slower in the zoom status.
This function has no effect during preset operations.

Focus Mode [Auto, Manual]

"Auto" or "Manual" is set here for the focusing function.
Auto: The subjects are always brought into focus automatically.
Manual: The focus is operated manually.
Switching between the focus modes is also possible by pressing the [A/FOCUS] and [M/FOCUS] buttons on the wireless remote controller.

Focus ADJ With PTZ. [Off, On]

"On" or "Off" is set here for the function which compensates for out-of-focusing when it occurs during panning, tilting or zooming operations at the manual focus setting.
When "Off" is set, adjust the focus as required after zooming or set the focus to the auto mode. This item can be selected only when "Manual" has been selected as the "Focus Mode" setting.

Return

Use this to return to the previous menu.

Setting the menu items

■ Other 2/2 screen

```
   ### Other 2/2 ###

⇨Tally Enable        Enable
  OSD Off With Tally     Off
  OSD Status             Off




  Return
```

Tally Enable [Disable, Enable]
Selecting this item has no effect since this is an expansion function.

OSD Off With Tally [Off, On]
Selecting this item has no effect since this is an expansion function.

OSD Status [Off, On]
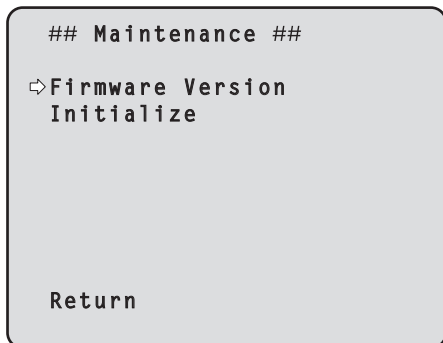"On" or "Off" is set here for the status display which appears during AWB operations.

Return
Use this to return to the previous menu.

Setting the menu items

■ Maintenance screen

```
  ## Maintenance ##

⇨Firmware Version
 Initialize




 Return
```

Firmware Version

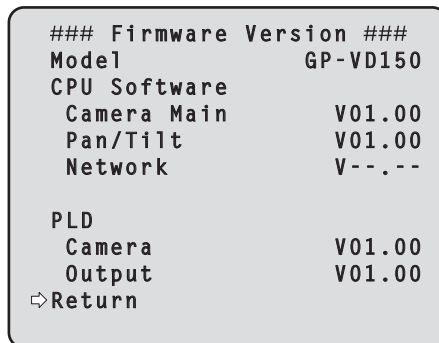This is selected to display the Firmware Version screen on which to check the version of the firmware used.

Initialize

This is selected to display the Initialize screen on which to initialize the camera's settings.
For details on operation, refer to "Concerning initialization" on page 30.

Return

Use this to return to the previous menu.

■ Firmware Version screen

```
### Firmware Version ###
Model              GP-VD150
CPU Software
 Camera Main        V01.00
 Pan/Tilt           V01.00
 Network            V--.--

 PLD
 Camera             V01.00
 Output             V01.00
⇨Return
```

Model

This displays the model name.

CPU Software Camera Main

This displays the software version of the camera unit.

CPU Software Pan/Tilt

This displays the software version of the pan-tilt unit.

CPU Software Network

This displays to display "V--.--".

PLD Camera

This displays the PLD version of the camera unit.

PLD Output

This displays the PLD version of the output unit.
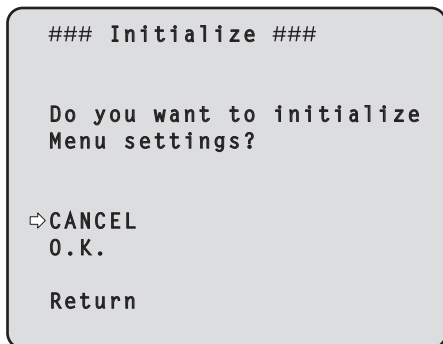
Return

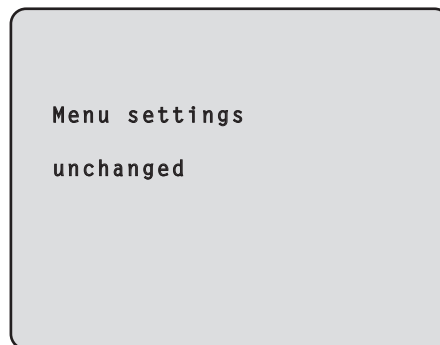Use this to return to the previous menu.

Setting the menu items

●Concerning initialization

When "Initialize" is selected on the Maintenance screen, the Initialize screen appears.

Initialize screen

```
    ### Initialize ###


    Do you want to initialize
    Menu settings?


  ⇨CANCEL
    O.K.

    Return
```

- When the cursor is moved to "O.K." on the Initialize screen and the setting is entered, the Menu settings initialize screen is displayed for 5 seconds, and the camera settings are restored to the settings which were established when the camera was purchased. However, the Format settings (see page 25) are not initialized.
  When the initialization operation is completed, the Initialize screen is restored to the display.

Menu settings initialized screen

```
    Menu settings

    initialized
```
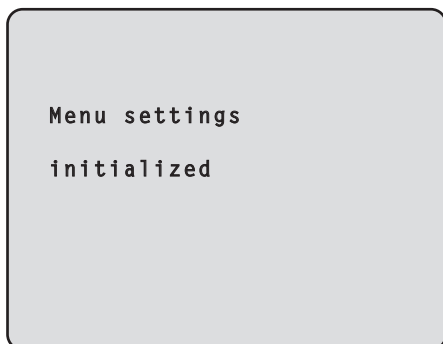
- When the cursor is moved to "CANCEL" on the Initialize screen and the setting is entered, the Menu settings unchanged screen is displayed for 5 seconds, the initialization operation is not performed, and the Initialize screen returns to the display.

Menu settings unchanged screen

```
    Menu settings

    unchanged
```

Menu item table

Menu			Item		Factory setting		Selection items
					FullAuto	**Manual1 to 3**	
Top Menu	Camera	Scene	Scene		FullAuto	Manual1	FullAuto, Manual1, Manual2, Manual3
			Contrast	Contrast Mode	Auto	Auto	Auto, Manual
				Contrast Level	0	0	−5 to +5
				Shutter Mode	----	----	Off, Step, Synchro
				Step/Synchro (When "Step" is selected as the "Shutter Mode")	----	----	● When 59.94 Hz is selected: 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 ● When 50 Hz is selected: 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
				Step/Synchro (When "Synchro" is selected as the "Shutter Mode")	----	----	● When 59.94 Hz is selected: 60.24Hz to 646.21Hz (1 to 255 steps) ● When 50 Hz is selected: 50.20Hz to 538.51Hz (1 to 255 steps)
				Frame Mix	----	----	Auto, Off, 6dB, 12dB, 18dB
				AutoF.Mix Max Gain	----	0dB	0dB, 6dB, 12dB, 18dB
				Gain	----	Auto	Auto, 0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB
				AGC Max Gain	----	18dB	6dB, 12dB, 18dB
			Picture	Picture 1/2	Chroma Level	----	−1	−3 to +3
				AWB Mode	----	AWB A	ATW, AWB A, AWB B
				R Gain	----	0	−30 to +30
				B Gain	----	0	−30 to +30
				Detail	----	Low	Off, Low, High
				Flesh Tone Mode	----	Off	Off, Low, High
				DNR	----	High	Off, Low, High
			Picture 2/2	Pedestal	----	−5	−10 to +10
				DRS	----	Low	Off, Low, High
				Gamma Type	----	----	Off, Normal, Cinema
				Gamma Level	----	----	Low, Mid, High
				Back Light COMP.	----	Off	Off, On
			Color Matrix 1/3	Matrix Select	----	USER	Normal, EBU, NTSC, USER
				Axis01 Saturation	----	+50	−127 to +127
				Phase	----	0	−127 to +127
				Axis02 Saturation	----	0	−127 to +127
				Phase	----	0	−127 to +127
				Axis03 Saturation	----	0	−127 to +127
				Phase	----	0	−127 to +127
				Axis04 Saturation	----	+35	−127 to +127
				Phase	----	+5	−127 to +127
				Axis05 Saturation	----	0	−127 to +127
				Phase	----	0	−127 to +127
				Axis06 Saturation	----	0	−127 to +127
				Phase	----	0	−127 to +127
			Color Matrix 2/3	Matrix Select	----	USER	Normal, EBU, NTSC, USER
				Axis07 Saturation	----	+30	−127 to +127
				Phase	----	0	−127 to +127
				Axis08 Saturation	----	−20	−127 to +127
				Phase	----	+10	−127 to +127
				Axis09 Saturation	----	0	−127 to +127
				Phase	----	−30	−127 to +127
				Axis10 Saturation	----	0	−127 to +127
				Phase	----	0	−127 to +127

Menu item table

Menu				Item		Factory setting		Selection items
						FullAuto	**Manual1 to 3**	
Top Menu	Camera	Scene	Color Matrix 2/3	Axis11	Saturation	----	+10	–127 to +127
					Phase	----	+50	–127 to +127
				Axis12	Saturation	----	0	–127 to +127
					Phase	----	0	–127 to +127
			Color Matrix 3/3	Matrix Select		----	USER	Normal, EBU, NTSC, USER
				Axis13	Saturation	----	0	–127 to +127
					Phase	----	0	–127 to +127
				Axis14	Saturation	----	+35	–127 to +127
					Phase	----	+10	–127 to +127
				Axis15	Saturation	----	0	–127 to +127
					Phase	----	0	–127 to +127
				Axis16	Saturation	----	0	–127 to +127
					Phase	----	0	–127 to +127
	System	Output		Format		1080/59.94i (When 59.94 Hz is selected)		● When 59.94 Hz is selected: 1080/59.94i, 480/59.94p
						1080/50i (When 50 Hz is selected)		● When 50 Hz is selected: 1080/50i, 576/50p
				Down CONV. Mode		Squeeze		Squeeze, SideCut
				HDMI Color		YCbCr422		RGB-NOR, RGB-ENH, YCbCr422, YCbCr444
		Other	Other 1/2	Install Position		Desktop		----
				Preset Speed		10		1 to 30
				Preset Scope		Mode A		Mode A, Mode B, Mode C
				Digital Zoom		Disable		Disable, Enable
				Speed With Zoom POS.		On		Off, On
				Focus Mode		Auto		Auto, Manual
				Focus ADJ With PTZ.		----		Off, On
			Other 2/2	Tally Enable		Enable		Disable, Enable
				OSD Off With Tally		Off		Off, On
				OSD Status		Off		Off, On
	Maintenance	Firmware Version		Model		GP-VD150		----
				CPU Software				
				Camera Main		Version shipped		----
				Pan/Tilt		Version shipped		----
				Network		----		----
				PLD				
				Camera		Version shipped		----
				Output		Version shipped		----
		Initialize		----		CANCEL		CANCEL, OK

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